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APPLICATION NO.	FIL	ING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO. CONFIRMATION NO.	
10/081,620	02	2/20/2002	P. Nick Lawrence	066300.0132 9692	
5073	7590	09/23/2004		EXAMINER	
BAKER BO		.P.	LEROUX, ETIENNE PIERRE		
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DALLAS, T	X 75201-	-2980	2171		

DATE MAILED: 09/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

X

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	Application No.	Applicant(s)	
	10/081,620	LAWRENCE ET AL.	
Office Action Summary	Examiner	Art Unit	
	Etienne P LeRoux	2171	
The MAILING DATE of this communication Period for Reply	appears on the cover sheet wi	th the correspondence address	
A SHORTENED STATUTORY PERIOD FOR RE THE MAILING DATE OF THIS COMMUNICATIO - Extensions of time may be available under the provisions of 37 CFF after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a - If NO period for reply is specified above, the maximum statutory per Failure to reply within the set or extended period for reply will, by sta Any reply received by the Office later than three months after the m earned patent term adjustment. See 37 CFR 1.704(b).	N. R 1.136(a). In no event, however, may a r reply within the statutory minimum of thin riod will apply and will expire SIX (6) MON atute, cause the application to become AE	eply be timely filed y (30) days will be considered timely. THS from the mailing date of this communication. ANDONED (35 U.S.C. § 133).	
Status			
1) Responsive to communication(s) filed on _			
•	· This action is non-final.		
3) Since this application is in condition for allo		ers, prosecution as to the merits is	
closed in accordance with the practice und	· · · · · · · · · · · · · · · · · · ·		,
Disposition of Claims			
4)⊠ Claim(s) <u>1-53 and 115</u> is/are pending in the	annlication		
4a) Of the above claim(s) <u>54-114 and 116-1</u>	• •	sideration.	
5) Claim(s) is/are allowed.			
6) Claim(s) 1, 2, 4, 5, 7-21, 32, 33, 35, 38-41,	51-53 and 115 is/are rejecte	d.	
7) Claim(s) 3, 5, 6, 22-31, 34, 36, 37 and 42-5	<u>50</u> is/are objected to.		
8) Claim(s) are subject to restriction an	d/or election requirement.		
Application Papers			
9) The specification is objected to by the Exam	niner.		
10)⊠ The drawing(s) filed on 20 February 2002 is		objected to by the Examiner.	
Applicant may not request that any objection to			
Replacement drawing sheet(s) including the cor	rection is required if the drawing	(s) is objected to. See 37 CFR 1.121(d	I) .
11) The oath or declaration is objected to by the	e Examiner. Note the attached	I Office Action or form PTO-152.	
Priority under 35 U.S.C. § 119			
12) Acknowledgment is made of a claim for fore	eian priority under 35 U.S.C. &	119(a)-(d) or (f).	
a) ☐ All b) ☐ Some * c) ☐ None of:			
1. Certified copies of the priority docum	ents have been received.		
2. Certified copies of the priority docum	ents have been received in A	pplication No	
3. Copies of the certified copies of the p	oriority documents have been	received in this National Stage	
application from the International Bu	reau (PCT Rule 17.2(a)).		
* See the attached detailed Office action for a	list of the certified copies not	received.	
Attachment(s)			
1) Notice of References Cited (PTO-892)	4) Interview S	Summary (PTO-413)	
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s	s)/Mail Date nformal Patent Application (PTO-152)	
 Information Disclosure Statement(s) (PTO-1449 or PTO/SB. Paper No(s)/Mail Date <u>5/6/2002</u>. 	/08) 5)	, , , , , , , , , , , , , , , , , , , ,	
S. Patent and Trademark Office			

Restriction/Election

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-53 and 115 are drawn to a method/system for identifying relationships between database records, classified in class 707, subclass 100
- IIa Claims 54-85 drawn to method/system for identifying relationships between database records including a determination of a number of times a token appears in a plurality of records, classified in class 707, subclass 200.
- IIb. Claims 86-100, drawn to a system for identifying relationships between database records including a token table, a records table and a records table index, classified in class 702, subclass 104
- IIc. Claims 101-114, drawn to a method for identifying relationships between database records including a record score, classified in class 707, subclass 6
- IId Claim 116 drawn to a method for identifying relationships between database records including an indexing engine, classified in class 707, subclass 3.
- IIe. Claim 117 drawn to a method for identifying relationships between database records including sending a document to a server for analysis, classified in class 714, subclass 46.
- IIf Claims 118 and 119 are drawn to a method for identifying relationships between database records including a relationship indicator formula, classified in class 705, subclass 1.

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Inventions I and IIa or IIb or IIc or IId or IIe or IIf are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because claim 1 is a system for investigating database records. The subcombination has separate utility such as system for weighting records (IIa), system for establishing a token table (IIb), method for identifying records by the number of times a token appears with a records (IIc), method for identifying documents, text files and records (IId), method for identifying records by comparing documents generated by a server (IIe), method for measuring distance between database objects (IIf).

This application contains claims directed to the following patentably distinct species of the claimed invention:

- I. Method/system for identifying relationships between database records
- IIa Method/system for identifying relationships between database records including a determination of a number of times a token appears in a plurality of records
- IIb. System for identifying relationships between database records including a token table
- IIc Method for identifying relationships between database records including a record score

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- IId Method for identifying relationships between database records including an indexing engine
- IIe Method for identifying relationships between database records including sending a document to a server for analysis
- IIf Method for identifying relationships between database records including a relationship indicator formula.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claim is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to

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be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

A telephone call was made to Ms Keiko Ichiye on 8/31/2004 to request an oral election to the above restriction requirement. Ms Ichiye elected, without traverse, claims 1-53 and 115 for initial examination on the merits.

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Status of Claims:

Claims 1-53 and 115 are pending for purposes of this first examination on the merits.

Claims 54-114 and 116-119 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in telephone call of 8/31/2004.

Claim Objections

Claims 3, 5, 6, 22-31, 34, 36, 37 and 42-50 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 1st paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 3 and 34 are allowable for including a formula for Weight as a function of token count and the number of times all tokens appear in the plurality of records.

Claims 5 and 36 are allowable for including a formula for Relationship Indicator as a function of the summation of weight of a token, common count of a token and score of a target record.

Claim 6 is at least allowable for being dependent from allowable claim 5.

Claims 22 and 42 are allowable for including a formula for number of values as a function of weight of a token and standard deviation.

Claims 23, 25, 43 and 45 are allowable for including a significance vector associated with the correlithm object.

Claim 24 is at least allowable for being dependent from allowable claim 23.

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Claims 26-31 are at least allowable for being dependent from allowable claim 25.

Claim 37 is at least allowable for being dependent from allowable base claim 36.

Claim 44 is at least allowable for being dependent from allowable claim 43.

Claims 46-50 are at least allowable for being dependent from allowable claim 45.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1 recites "compare at least one second record to the first record and determine at least one relationship indicator based on the comparison and at least one of the weights." The skilled artisan would know how to determine at least one relationship indicator based on the weight of the tokens but would not know how to make a relationship indicator based on a "comparison" because the manner and process of making a "comparison" with reference to a relationship indicator is not clearly and concisely described in the specification.

Claims 2-33 are rejected for being dependent from a rejected base claim.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 4, 18, 18 and 40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites "the common count value representing a minimum number of times that the common token appears in either the first record or the second record." The scope of the invention is difficult to ascertain because it is unclear how common can be defined as the minimum number of times a token appears in either the first record or the second record. The normal definition of common would be something that appears in both a first instance and a second instance.

Claims 18 and 40 recite "each first entry comprising one of the tokens, [...] the weight of the token, and a first count of a token." The scope of the invention is difficult to determine because it is unclear how a first entry can include a token weight and a token count. For purposes of this examination it will be assumed that token weight is the same thing as token count.

Claims 18 and 40 recite "generate a records table comprising a plurality of second entries, [....] the second count value representing a number of times that the token associated with the second entry appears in the record." The scope of the invention is difficult to determine because it is unclear how the records table differed from the token table because both include the same thing, i.e., the count value of the tokens.

Claims 18 and 40 recite "generate a records table index comprising a plurality of third entries, [...] each third entry associated with one of the records and comprising an identification of at last one second entry associated with the record and a record score associated with the

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record." The scope of the invention is difficult to determine because the function and purpose of the records table index is difficult to determine. It appears that the records table includes third entries which are the same as the second entries of the records table above. For purposes of this examination it will be assumed that the first entry, the second entry and the third entry are the same and that they are the number of times a token appears in the record.

Claims 19 is rejected for being dependent from a rejected base claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, 7-10, 12, 13, 14, 17-20, 33, 35, 38-40, 52, 53 and 115 are rejected under 35 U.S.C. 102(b) as being anticipated by US Pat No 6,081,774 issued to de Hita et al (hereafter (de Hita), as best examiner is able to ascertain.

Claims 1, 33, 52, 53 and 115:

de Hita discloses:

- a memory [Fig 2, 216] operable to store a plurality of records comprising a first record and at least one second record, each record comprising at least one of a plurality of tokens [col 3, lines 50-55];
- one or more processors [Fig 2, 220] collectively operable to:
- determine a weight [col 3, line 67] associated with each of the tokens;

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• compare at least one second record to the first record; and determine at least one relationship indicator based on the comparison and at least one of the weights, the at least one relationship indicator identifying a level of relationship between the first record and at least one second record [topic prioritizer, col 4, lines 40-47].

Claims 4 and 35:

de Hita discloses wherein the one or more processors are collectively operable to compare one of the second-records to the first-record-by:-identifying-any-common tokens, a common token comprising one of the tokens that appears in both the first record and the second record; and identifying a common count value for each common token, the common count value representing a minimum number of times that the common token appears in either the first record or the second record [col 3, lines 50-60].

Claim 7:

de Hita discloses each of the plurality of records is associated with at least one document; the one or more processors are collectively operable to compare a plurality of second records to the first record and determine a plurality of relationship indicators; and the one or more processors are further collectively operable to: select one or more of the second records based on the relationship indicators; and make the documents associated with the one or more second records available to a user [col 2, lines 35-47].

Claim 8:

de Hita discloses wherein the one or more processors are collectively operable to select the one or more second records based on input from the user [col 4, lines 48-57]

Claim 9:

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de Hita discloses wherein the one or more processors are collectively operable to allow a user to select the first record, wherein selecting the first record comprises at least one of selecting one of the plurality of records and submitting a document that the one or more processors may use to generate the first record [col 3, line 50 through col 4, line 2].

Claims 10, 12 and 38:

de Hita discloses wherein the one or more processors are further collectively operable to generate a plurality of text files, each text file associated with one of a plurality of documents and comprising the at least one token contained in the associated document [col 3, lines 50-col 4, line 2].

Claims 13 and 39:

de Hita discloses wherein the one or more processors are collectively operable to generate one of the records by: identifying one-word tokens in one of the text files, the one-word tokens comprising individual words in the text file; inserting the one-word tokens into the record; selecting pairs of one-word tokens in the record, each pair of one-word tokens comprising consecutive one-word tokens in the record; combining the pairs of one-word tokens to produce two-word tokens; and inserting the two-word tokens into the record [Fig 11, col 22, lines 33-65] Claim 14:

de Hita discloses wherein the one or more processors are further collectively operable to ignore at least one stop word in the text file when identifying one-word tokens in one of the text files [col 10, lines 61-67].

Claim 17:

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de Hita discloses wherein the one or more processors are further collectively operable to: receive a query from a user; identify one or more records that satisfy the query; identify one or more documents associated with the one or more records; and make the one or more documents available to the user [col 7, line 65 – col 8, line 26]

Claims 18 and 40:

de Hita discloses wherein the one or more processors are further collectively operable to: generate a token table comprising a plurality of first entries, each first entry comprising one of the tokens, a token representation associated with the token, the weight associated with the token, and a first count value associated with the token, the first count value representing a number of times that the token appears in the plurality of records; generate a records table comprising a plurality of second entries, each second entry associated with one of the records and comprising one of the token representations and a second count value, the token representation in the second entry associated with one of the tokens contained in the record, the second count value representing a number of times that the token associated with the second entry appears in the record; and generate a records table index comprising a plurality of third entries, each third entry associated with one of the records and comprising an identification of at least one second entry associated with the record and a record score associated with the record [col 4, lines 40-48].

Claim 19:

de Hita discloses wherein the one or more processors are further collectively operable to convert at least one of the plurality of records, the token table, the records table, and the records

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table index from a first format to a second format, the second format used by an external system [Fig 1, 150, 160, 180, 190]

Claim 20:

de Hita discloses wherein the one or more processors are further collectively operable to categorize each of the records based at least partially on the tokens contained in the records and locations of the tokens in the records [col 4, lines 40-48].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over de Hita in view of US Pat No 5,675,819 issued to Schuetze (hereafter Schuetze), as best examiner is able to ascertain.

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Claim 2:

de Hita discloses the elements of claim 1 as noted above.

de Hita fails to disclose wherein the weight associated with one of the tokens is inversely proportional to a number of times that the token appears in the plurality of records.

Schuetze discloses wherein the weight associated with one of the tokens is inversely proportional to a number of times that the token appears in the plurality of records [col 17, lines 30-50].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify de Hita to include wherein the weight associated with one of the tokens is inversely proportional to a number of times that the token appears in the plurality of records as taught by Schuetze for the purpose of dropping the weight assigned to a word that occurs very frequently such as "the." The ordinarily skilled artisan would have been motivated to improve the invention of de Hita by assigning a low score to words such as "the" because the user does not want to have any significance assigned to the word "the" because "the" does not provide the user with useful information.

Claims 11 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over de Hita in view of US Pat No 6,553,365 issued to Summerlin et al (hereafter Summerlin), as best examiner is able to ascertain.

Claims 11 and 16:

de Hita discloses the elements of claim 10 as noted above.

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de Hita fails to disclose wherein the one or more processors are collectively operable to generate the plurality of text files by performing at least one of optical character recognition and file conversion on each of the documents.

Summerlin discloses wherein the one or more processors are collectively operable to generate the plurality of text files by performing at least one of optical character recognition and file conversion on each of the documents [col 6, lines 15-25].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify de Hita to include wherein the one or more processors are collectively operable to generate the plurality of text files by performing at least one of optical character recognition and file conversion on each of the documents as taught by Summerlin for the purpose of reading contract documents that an organization has entered into. The ordinarily skilled artisan would have been motivated to improve the invention of de Hita by including optical character recognition and file conversion so that documents can be retained in a database for approximately five years [col 6, lines 15-30].

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over de Hita in view of US Pat No 5,325,091 issued to Kaplan et al (hereafter Kaplan), as best examiner is able to ascertain.

Claim 15:

de Hita discloses the elements of claims 1, 10 and 12 as noted above.

de Hita fails to disclose wherein the one or more processors are further collectively operable to: replace the tokens in the record with one or more token representations; and

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consolidate the record by ensuring that each unique token or token representation appears only once in the record.

Kaplan discloses wherein the one or more processors are further collectively operable to: replace the tokens in the record with one or more token representations; and consolidate the record by ensuring that each unique token or token representation appears only once in the record [col 5, lines 1-15].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify de Hita to include wherein the one or more processors are further collectively operable to: replace the tokens in the record with one or more token representations; and consolidate the record by ensuring that each unique token or token representation appears only once in the record as taught by Kaplan for the purpose of being able to rank the tokens [col 5, lines 1-15]

Claims 21, 32, 41 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over de Hita in view of US Pat No 6,167,391 issued to Lawrence (hereafter Lawrence) as best examiner is able to ascertain.

Claims 21 and 41:

de Hita discloses the elements of claim 1 as noted above.

de Hita fails to disclose wherein the one or more processors are further collectively operable to generate a correlithm object associated with at least one of the tokens, the correlithm object comprising a plurality of values defining a first point in a particular space, the particular space defined by a plurality of dimensions and including a plurality of points.

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Lawrence discloses wherein the one or more processors are further collectively operable to generate a correlithm object associated with at least one of the tokens, the correlithm object comprising a plurality of values defining a first point in a particular space, the particular space defined by a plurality of dimensions and including a plurality of points [col 3, line 62 – col 4, line 12, col 10, lines 1-10]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify de Hita to include wherein the one or more processors are further collectively operable to generate a correlithm object associated with at least one of the tokens, the correlithm object comprising a plurality of values defining a first point in a particular space, the particular space defined by a plurality of dimensions and including a plurality of points as taught by Lawrence for the purpose of classifying a unit of living information as a nonreducible textual element in data that is being parsed. The ordinarily skilled artisan would have been motivated to improve the invention of de Hita by including a correlithm object so that the prior art techniques related to tokens can be made available to living information processing systems [Lawrence, col 3, line 62 – col 4, line 12, col 10, lines 1-10].

Claims 32 and 51

de Hita discloses the elements of claim 1 as noted above.

Furthermore de Hita discloses each pair of one-word tokens comprising consecutive one-word tokens in the record; combining the pairs of one-word tokens to produce two-word tokens; and inserting the two-word tokens into the record [Fig 11, col 22, lines 33-65].

¹ Definition of token, Microsoft Computer Dictionary Fifth Edition

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de Hita fails to disclose a token comprises a first correlithm object and a second correlithm object.

Lawrence discloses a token comprises a first correlithm object and a second correlithm object [col 3, line 62 – col 4, line 12, col 10, lines 1-10].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify de Hita to include at least one token comprises a first correlithm object and at least one of the records comprises a second correlithm object, the second correlithm object comprising at least one of the first correlithm objects for the purpose of combining a first correlithm object and a second correlithm object into a single token representation. The ordinarily skilled artisan would have been motivated to improve the invention of de Hita so that searching can be speeded up by searching for a token which includes a first correlithm object and a second correlithm object.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Etienne LeRoux whose telephone number is (703) 305-0620. The examiner can normally be reached on Monday – Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic, can be reached on (703) 308-1436.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900. Patent related correspondence can be forwarded via the following FAX number (703) 872-9306

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Etienne LeRoux

9/18/2004

SAFET METJAHIC SUPERVISORY PATENT EXAMINER

TECHNOLOGY CENTER 2100